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ABSTRACT

Drawing upon a study conducted at a large, urban community college district, this report assesses the academic skill levels and persistence of liberal arts students. After introductory material noting the declining skill levels of entering college students, the report describes the study, which involved Fall 1980 surveys of instructors and students in a cross section of classes and an analysis of 8,882 transcripts representing a random sample of students enrolled in the district in Fall 1979. The report then focuses on the survey findings that relate to the responses of 4,171 students and 175 faculty members in humanities, science, and social science classes. The survey investigated: (1) instructors' ratings of their students' skills in 14 competency areas, including reading, writing, speaking, computation, and study skills; (2) students' ratings of their own competence in these areas; (3) instructors' estimates of the percentage of their students who could benefit from basic skills programs; and (4) the percentage of students who actually took advantage of these programs. Next, the report draws from the transcript analysis to detail course completion rates for students in science and social science courses between Fall 1974 and Spring 1979. Finally, the report presents summary conclusions and discusses the implications of the findings for college planning. (JP)

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The decline in the academic skills of entering college students is well documented. Scores on the mathematical and verbal ability sections of the Scholastic Aptitude Tests have declined each year since 1968 (Copperman, 1978). This downward trend in the skills of high school juniors and seniors is also documented by the American College Testing Program (1972, 1976, 1980) and the National Assessment of Educational Programs (Education Commission of the States, 1978).

Reports emanating from community colleges confirm this slide in student academic skills. To illustrate, the results of a basic skills testing program at Miami-Dade Community College revealed that 64 percent of the students were deficient in their computational skills, 43 percent deficient in their reading skills, and 43 percent needed remediation in written English expression (McCabe, 1981).

Given the growing concern on the part of educators and the public with the decline in student basic skills, it would be useful to have information on the following questions: How do instructors of liberal arts courses rate most students in their abilities to perform basic academic skills? How confident are students enrolled in liberal arts courses in their academic skills? What percentage of the liberal arts faculty think that most students in their classes need assistance with their academic skills? To what extent do students who are deficient in their academic skills take advantage of the college's programs designed to correct those deficiencies? What percentage of the liberal arts courses in which students enroll are successfully completed?

The questions on student skills and their use of support services can be answered from data obtained in a survey of faculty teaching courses in the humanities, sciences, and social sciences (N=175) and then students (N=4,171) in a large multi-campus urban community college district. Information on course completion rates is available from an analysis of student transcripts (N=8,873) from the same district.

This National Science Foundation sponsored study conducted by the Center for the Study of Community Colleges involved administering surveys to students and instructors in ~~all~~ every third class sections offered at 10:00 a.m. and 7:00 p.m. on Wednesday of the fifth week of the 1980 Fall term. Completed surveys were obtained from 268 of the instructors (175 were in the liberal arts) and 6,426 of the students (4,171 were in liberal arts classes) in their classes. The transcript study involved examining the course-taking histories of a random sample of students (N=8,882) enrolled in the district in the Fall of 1979.

Instructor Ratings of Their Students' Skills

Instructors were asked concerning a specified course they were teaching, "How do you rate the abilities of most of the students in your class?" The response categories were as follows: (1) most of my students are able to do this adequately; (2) most of my students have difficulty in doing this; and (3) most of my students are unable to perform this skill adequately. Responses to this question are presented in Table 1.

Insert Table 1 Here

The information reported in Table 1 shows that just over one-half of the instructors noted that most of their students were able to do the following activities adequately: express themselves when speaking (57%), summarize

major points in class readings (54%), work on laboratory exercises by following a set of written directions (53%), and have the necessary time to complete course assignments (51%). Less than 30% of the instructors felt that most of their students were able to perform the following competencies adequately: learn on their own, pursue ideas, and find needed information (25%), express themselves in writing (22%), identify biases that might have influenced the findings of a research report (15%), work on problems or assignments that require college algebra, analytic geometry, or calculus (15%), and work on problems or assignments that require statistics (9%).

The findings in Table 1 show that a high percentage of the instructors--over 40%-- noted that most of the students in their classes had difficulty in performing each of the basic skills considered. According to the instructors, the skill areas in which their students were strongest were speaking and completing course reading assignments. The competencies in which students were weakest were in the basic skills areas--mathematics, writing, identifying biases in research reports, and independent inquiry.

Student Self-rating of Skills

In the classes of the liberal arts instructors who responded to the faculty survey, the students were also asked to rate their abilities on each of the same fourteen competencies. The response categories were as follows: (1) confident, (2) somewhat confident, (3) not confident. The data appearing in Table 1 reveal that the activities in which the highest percentage of students felt confident were: understanding course reading assignments (66%); learning on their own, pursuing ideas, finding needed information (63%); and solving problems that require arithmetic (61%). Other activities in which over 50% of the students felt confident were: having the necessary time to complete course assignments (58%), working on laboratory exercises by following a set of written directions

(58%), expressing themselves in writing (54%), and summarizing major points in class readings (50%). At the other end of the confidence continuum, less than 40% of the students reported that they were confident in their ability: to understand science and technical developments and their uses in society (39%); to identify biases that might have influenced the findings of a research report (37%); to solve problems that require college algebra (25%); and to solve problems that require statistics--proportions, probabilities (17%). Thus students feel most confident in their ability to learn on their own, to understand and complete course assignments, and they feel least confident in matters pertaining to mathematics and science.

Perhaps the most significant finding to appear in Table 1 is the consensus among students and their instructors that a high percentage of students--in most instances over 50%--have some difficulty in performing activities that require reading, writing, speaking, solving problems requiring arithmetic or algebra, understanding science, identifying biases in research reports, and engaging in independent inquiry.

Student Need of Support Services in Basic Skills

Liberal Arts instructors were asked concerning a specified course they were teaching to indicate the percentage of their students who could benefit from basic skills programs provided by the college. The response categories were as follows: 0-25%; 26-50%; 51-75%; and 76-100%. The information presented in Table 2 shows the percentage of instructors who stated that over 50% of their students could benefit from a support service.

Insert Table 2 Here

Here we find that over one-half of the instructors felt that most students in their classes could benefit from basic skills courses in reading and writing and in the sciences. Over 40% of the liberal arts faculty noted that most students in their courses could profit from a basic skills course in mathematics and also from some tutoring in science and mathematics.

As one might expect, the data in Table 2 reveals that liberal arts instructors felt that a much greater number of their students could benefit from college academic assistance programs than the number of students who actually used those assistance programs. For example, while 48% of the instructors noted that more than half of their students could benefit from a basic skills course in mathematics only 14% of their students had actually taken advantage of such a course.

Percentage of Students Using Academic Support Services

The consensus among liberal arts instructors that a high percentage of their students had difficulty in doing basic academic skills and that most could benefit from the college's basic skills programs leads to the following question: What percentage of the students who felt they were weak in an academic skill took advantage of a college assistance program designed to correct that deficiency?

Insert Table 3 Here

The data presented in Table 3 shows that of those students who did not feel confident in a skill area less than 30% took advantage of a support program designed to assist them in that skill area. For example:

Of the students who did not feel confident in their writing abilities, 29% sought some type of assistance for their writing skills;

Of those who did not feel confident in their reading abilities, 28% took advantage of the college's support programs to improve reading;

Of those students who did not feel confident in their abilities to solve problems that required arithmetic, 20% received assistance from a college support program in developmental mathematics;

Of those students who were not confident in their abilities in science, 10% took advantage of the college support program in that area.

These findings indicate that despite the efforts to provide students with the support programs and assistance they need to succeed in college-level courses, the majority of those who could have profited most from the assistance provided were not taking advantage of these programs.

Course Completion Rates in Liberal Arts Courses

Course attrition rates in many community college courses often range from 30 to 60%. Studies of course attrition show that completion rates in liberal arts courses are typically lower than those found in occupational and technology classes (Friedlander, 1980). In the present study, course completion rates were based on an analysis of 8,873 transcripts (a seven percent random sampling) of students enrolled in the district in Spring 1979. The data analyses were based on all science and social science courses in whch these students were enrolled and were on record during the first census week (fourth week of the term) between Fall 1974 and Spring 1979.

The results of this analysis revealed that students completed 52% of the science courses in which they enrolled. Course completion rates ranged from 56% in the social sciences to 48% in mathematics.

Discussion

The findings of this study can be summarized as follows: (1) there was much variation in the educational abilities of students enrolled in liberal arts courses; (2) a high percentage of the students participating in liberal arts courses had difficulty in performing activities involving reading, writing, arithmetic, algebra, sciences, identifying biases in reports, and finding information on their own--the very skills that provide the basis of a sound liberal arts education; (3) most students with deficiencies in their basic learning skills did not seek assistance from the programs designed to strengthen their skills; and (4) probably as a consequence of all these factors, attrition rates in liberal arts courses were extraordinarily high.

Perhaps the most significant finding of this study was that many of the liberal arts instructors were being asked to teach their courses to groups of students whose reading, writing, and computational skills ran the gamut from poor to excellent.

Robert McCabe, President of Miami-Dade Community College has noted that asking faculty to provide instruction to groups of students with such a wide range of academic competencies places the faculty in a situation where neither they nor the students have much opportunity to succeed. Some support for McCabe's observation is found in the results of nationwide surveys (Cohen and Brawer, 1977; Brawer and Friedlander, 1979) of instructors teaching courses in the humanities, sciences, and social sciences which showed that over one-half of the faculty said their courses could be made better if they had "students who were better prepared to handle course requirements." Over one-fourth of the instructors noted that their courses could be made better if there were "stricter prerequisites for admission to class."

Not only is the practice of permitting students to enroll in a course regardless of their academic abilities or likelihood for success in that

course undermining the instructor's ability to effectively present the class, but it is also having an adverse affect on the students--especially those with weak academic backgrounds and those who plan to transfer to four-year colleges and universities. Studies have shown that course attrition rates are often as high as 30% to 50% and that much of this attrition is a consequence of student difficulty in keeping up with the course (Friedlander, 1981a; 1981b). As for transfer students, Kissler (1980) found that in many states, not only are fewer community college students transferring to four-year institutions, but among those who do, more are put on academic probation, and more fail to graduate. (This finding was true of the district from which the data in this paper were obtained.) Such findings are typically attributed to the increase in the number of students entering transfer courses with deficiencies in basic academic skills. This in turn has forced many instructors to lower the level at which their course is presented.

It is becoming increasingly apparent that the system of permitting students to enroll in courses they wish to attend, regardless of preparation and without adequate information, advice, or support is not a viable method for creating a learning environment in which both faculty and students have an opportunity to succeed. Clearly the greatest challenge facing community college educators in the 1980s is to develop alternative models for handling the following demands: expose all students--from the educationally underprepared to the academically advanced--to the humanistic and scientific thought on which college-level liberal arts courses are based; provide effective instruction and support to the increasing numbers of students who lack the basic skills necessary for success in college-level liberal arts courses; ensure that students enrolled in liberal arts courses develop the skills necessary to succeed in those courses; and maintain high standards in all courses. Accomplishing these objectives will

not be easy or inexpensive, but they are essential to strengthening the quality of community college academic programs.

Table 1

Student and Faculty Ratings of

Academic Abilities of Community College Students

(In Percentages)

	Liberal Arts Instructor Ratings of Students' Abilities		Students in Liberal Arts Courses of Own Abilities	
	Able	Have Difficulty Or Unable	Confident	Somewhat or Not Confident
Summarize major points in readings	54%	46%	50%	50%
Spend concentrated period of time studying	33%	67%	49%	51%
Have time to complete course assignments	51%	49%	57%	43%
Work on lab exercises by following directions	53%	47%	58%	42%
Integrate various parts of course	37%	63%	49%	51%
Identify biases in research reports	15%	85%	37%	63%
Express self in speaking	57%	43%	48%	52%
Express self in writing	22%	78%	54%	46%
Solve problems that require algebra or geometry	15%	85%	25%	75%
Solve problems that require arithmetic	36%	64%	61%	39%
Solve problems that require statistics	9%	91%	17%	83%
Learn on own--independent inquiry	25%	75%	63%	37%
Understand course reading	47%	53%	66%	34%
Understand science developments	35%	65%	39%	61%

Table 2

Percentage of Liberal Arts Instructors
Who Stated Their Students Could Benefit from a
Support Service and Percentage of Students
Who Used That Service

Support Service	Percent of Instructors Who Indicated Over Half Their Students Needed Service (N=175)	Percent of Students Who Used Service (N=4,171)
Basic skills--reading and writing	53	21
Basic skills--mathematics	48	14
Basic skills--science	53	8
Tutoring--mathematics	41	13
Tutoring--science	46	8

Table 3

Percentage of Students Who Were Not Confident in Their Abilities and Who Used a Support Service

(N=4,171)

Skill Area	Percent of Students Who Used a Support Service to Strengthen a Skill in Which They Were Deficient
Writing	29
Reading	28
Study Skills	27
Arithmetic	20
Algebra	19
Budgeting of Time	16
Scientific Thinking	10

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